

WE CLAIM:

1. A mold assembly for blow molding a plastic article comprising;

(a) an upper mold member having an upper molding cavity;

5 (b) a lower support member; and

(c) a lower mold member having a lower molding cavity, said lower molding cavity being shaped to co-operate with said upper molding cavity, said lower mold member having means for being matingly receivable in and supportable by said lower support member, said lower  
10 mold member being moveable from a position adjacent a parison extrusion head for receiving a parison in said lower molding cavity to a position where said lower member is received in said lower support member, and said mold assembly is closeable with said lower mold member positioned intermediate said upper mold member and said lower  
15 support member, said mold assembly, when closed, being capable of expanding said parison disposed within said mold assembly.

2. The mold assembly of claim 1 wherein said lower mold member comprises a substantially planar plate member.

3. The mold assembly of claim 1 wherein said lower molding  
20 cavity is centrally located in said lower mold member.

4. The mold assembly of claim 1 wherein said lower mold member is moveable by robotic means.

5. The mold assembly of claim 1 wherein said upper mold member and said lower support member are positionable remote from  
25 said extrusion head and said lower mold member is transportable between said extrusion head and said lower support member.

6. The mold assembly of claim 1 wherein said lower mold member and said lower support member have co-operating alignment means to align said lower mold member and said lower support member.

7. A mold member for use in a mold assembly for blow molding a plastic article, said mold assembly having an upper mold member and a lower support member, the mold member comprising:

a molding cavity for receiving a molten parison, said mold member being moveable beneath a parison extrusion head for receiving a parison in said molding cavity, said molding member being subsequently positionable in said lower support member, said mold member being shaped to allow said mold assembly to be closeable with said mold member positioned intermediate said upper mold member and said lower support member.

8. A method for blow molding a plastic article comprising:

(a) providing a mold assembly having:

(i) an upper mold member having an upper molding cavity;

(ii) a lower support member; and

(iii) a lower mold member having a lower molding cavity, said lower molding cavity being shaped to co-operate with said upper molding cavity, said lower mold member being matingly receivable in said lower support member;

(b) extruding a parison from an extrusion head;

(c) moving said lower mold member beneath said extrusion head as said parison is extruded so that said parison is received in said lower molding cavity;

(d) translating said lower mold member and said parison to adjacent said lower support member;

(e) positioning said lower molding member in said lower

support member;

(f) closing said mold assembly by moving said upper mold member toward said lower support member with said lower mold member positioned intermediate said upper mold member and said lower support member;

5 (g) expanding said parison.

9. The method of claim 8 wherein said upper mold member and said lower support member are positioned remote from said extrusion head.

10 10. The method of claim 8 further comprising:

(a) opening said mold assembly by removing said upper mold member from said lower support member;

(b) removing said lower mold member from said lower support member; and

15 (c) cooling said lower mold member.

11. The method of claim 10 wherein said cooling comprises applying a fluid to said lower mold member.

12. The method of claim 10 wherein said cooling comprises substantially immersing said lower mold member in a liquid.

20 13. A molding system for blow molding plastic articles comprising a robotic arm, at least one extrusion head for extruding a parison of thermoplastic material suitable for use in blow molding, and a plurality of molding stations,

each said molding station comprising an upper mold member having an upper molding cavity and a lower support member,  
25 said system further including at least one lower mold member having a lower molding cavity, said lower molding cavity being

shaped to cooperate with said upper molding cavities, said lower mold member having means for being matably receivable in and supportable by said lower support member of each said molding station, said robotic arm being capable of moving said lower mold member between a position  
5 adjacent said extrusion head for receiving said parison in said lower molding cavity, to a position where said lower molding member is receivable in a lower support member of each said molding stations,

and each said molding station is closable with said lower mold member positioned intermediate said upper mold member and said  
10 lower support member of said station, said molding station when closed, being capable of expanding said parison disposed within said mold assembly.

14. The molding system of claim 13 comprising a plurality of lower molding members.

15. The molding system of claim 14 wherein the shape of the molding cavity at each of said plurality of stations is the same.

16. The molding system of claim 14 wherein the shape of the molding cavity at each of said plurality of stations is different.